Occurrence of *Sphyraena qenie* (Sphyraenidae) in the tropical eastern Pacific, with a key to the species of barracudas occurring in the area

by

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RÉSUMÉ. - Présence de *Sphyraena qenie* (Sphyraenidae) dans le Pacifique tropical est, avec une clé des barracudas présents dans la zone.

Cinq à six espèces de barracudas sont signalées dans le Pacifique tropical est, mais quatre seulement sont avérées et communément citées. Le point est fait sur la présence des deux autres espèces. Pour la première fois, un spécimen de *Sphyraena qenie* est observé sur la côte centrale de l'Équateur au sud de son aire de répartition. La présence de cette espèce, dans le Pacifique Est, est probablement sous-estimée en raison de problèmes taxinomiques concernant ce groupe et en particulier une confusion avec *Sphyraena ensis*.

Key words. - Sphyraenidae - *Sphyraena qenie* - TEP - Ecuador - First record.

On 27 December 2005, an unusually large barracuda (Sphyraenidae) was observed in the fish market of Puerto López in Manabí, Ecuador. The specimen, which measured 1192 mm TL, and weighed 8900 g, was acquired by the author on the beach, just after landing (Fig. 1). It was taken by the artisanal fishery, off central Ecuador, 15 miles offshore from Puerto López (01°33'S, 80°49'W), with surface gill-net. Large barracudas are rare and seldom caught, but they are locally known, usually caught by trawling at night. This specimen was alone and seen for the first time in Puerto López by the author. Due to its large size, only the skeleton was kept and is now part of the author's fishbone collection under the number 6970. The main meristic and morphometric data are as follows: D V-I, 9; A II, 8; P i, 13; 1192 mm TL; 1075 mm FL; 993 mm SL; 298 mm HL; 170 mm body height; 46.6 mm eye diameter; 111.3 mm pectoral length; Ll = 125.

Life coloration: body blue black above, with vertical dark crossbars reaching well below lateral line; belly silvery grey; all fins blackish.

This specimen appeared to be a blackfin barracuda, *Sphyraena qenie* Klunzinger, 1870. This species can be separated from the other barracudas of the Tropical Eastern Pacific by the following combination of characters: tips of pectoral fins reaching to origin of pelvic and dorsal fins, no gill rakers, more than 120 lateral line pored scales, all fins blackish, caudal fin trilobed in large specimens.

Sphyraena qenie is widespread in the tropical Indo-Pacific Ocean; its geographical range is from South Africa and Red Sea to central Pacific. Records from eastern Pacific are rare, unprecise and poorly documented: Mexico and Panama (De Sylva and Williams, 1986), Clipperton Island (Robertson, pers. com.), Panama (Myers, 1999), and possibly Gorgona Island, Colombia (Acero and Franke, 2001). The present specimen is the first objective record of *S. qenie* for continental Ecuador.

Franke and Acero (1996) pointed out that serious taxonomic problems exist among Tropical Eastern Pacific barracudas, and in fact it seems they had difficulties to separate *S. ensis* Jordan & Gilbert, 1882 from *S. qenie* and precautiously mentioned *Sphyraena* sp. for Gorgona. The authors then suggested that Gorgona's large barracudas might be *S. qenie* (Acero and Franke, 2001). If the largest specimen they examined (a female 2000 mm TL, 1440 mm SL, 32 kg) really represents a *S. qenie*, this should be one of the biggest specimen known to date.

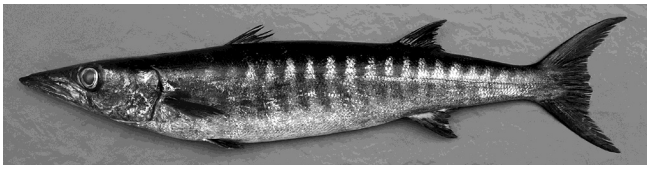

Figure 1. - *Sphyraena qenie*, 1192 mm TL, Puerto López, Ecuador.

Only two barracudas are commonly found in Ecuador, *S. ensis* and *S. idiastes* Heller & Snodgrass, 1903. The former is widespread in the Tropical Eastern Pacific, the latter is restricted to northern half of Peru, Ecuador and southern Colombia (Allen and Robertson, 1994; Franke and Acero, 1996; Chirigno and Cornejo, 2001; Jiménez-Prado and Béarez, 2004). If *S. idiastes* is easily recognizable (see key below), *S. ensis* and *S. qenie* are probably often confused. While *S. ensis* attains a maximal size of 750 mm (736 mm TL, pers. obs.), *S. qenie* can reach at least the double (Myers, 1999). Also, it is important to note that *S. qenie* has blackish fins, a character included in the description: "Alle flossen schwärzlich" (Klunzinger, 1870), and not only the dorsal, caudal and anal fins, as often cited in the literature (Myers, 1999; De Sylva and Williams, 1986).

The specimen caught was a mature male, fluent. The stomach content consisted in three almost completely digested lumptail searobins *Prionotus stephanophrys* Lockington, 1881. This prey species could easily be identified thanks to its typical swollen bones (Meunier *et al*., 1999). Three neurocranium, two operculum, two hyperostotic caudal vertebrae, and one otolith were recovered (Fig. 2). The lumptail searobin is a benthopelagic species living somewhat offshore, between 20 and 300 m deep (Schmitter-Soto and Castro-Aguirre, 1996; Chirigno and Cornejo, 2001). While juvenile *P. stephanophrys* occupy the water column, adults (> 140 mm SL) tend to be bottom dwellers (Schmitter-Soto and Castro-Aguirre, 1996). The size of the individual preys was estimated by comparison (maximal width of neurocranium at frontals level) with skeletons from the author's collection[1] and gave a range of 20 to 23 cm TL (90-140 g body weight), which corresponds to adult specimens. This would imply that *S. qenie* goes relatively deep to feed, although this is to be moderated by the fact that the populations of lumptail searobins go up towards the surface during the night hours (Castillo *et al*., 2001).

[1] On the basis of 4 specimens ranging from 208 to 258 mm TL (92-166 g).

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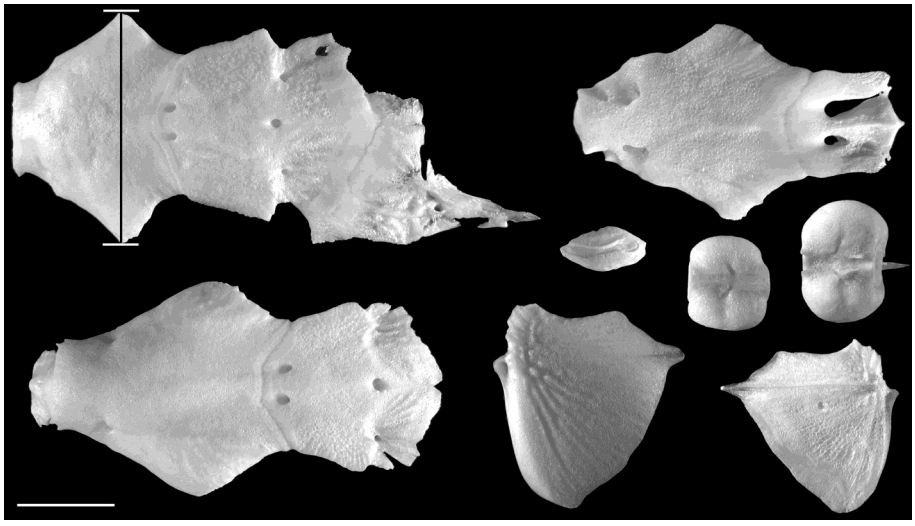

Figure 2. - Bone remains and otolith of *Prionotus stephanophrys* found in the stomach content of the barracuda (*S. qenie*) caught at Puerto López; Scale bar = 1 cm; the black stroke indicates the measurement place on the neurocranium. *[Restes osseux et otolithe de* Prionotus stephanophrys *retrouvés dans l'estomac du barracuda (*S. qenie*) capturé à Puerto López ; Échelle = 1 cm ; le trait noir indique la mesure prise sur le neurocrâne.]*

The lumptail searobin is a common species in the area; it is often caught as bycatch in the Peruvian hake fishery (Samamé *et al*., 1983), and is also sometimes exploited at industrial level in northern Peru, especially during ENSO events.

Key to the species of barracudas occurring in the TEP

1a - Lateral-line scales less than 90; sides with several inky blotches beneath lateral line ..... *Sphyraena barracuda**
1b - Lateral-line scales more than 110; no black blotches on ventral sides of body 2
2a - Tips of pectoral fins reaching to origin of pelvic fins; body with many vertical dark bars 3
2b - Tips of pectoral fins not reaching to origin of pelvic fins; body without vertical dark bars 4
3a - Sides with chevron-shaped markings; caudal fin without a pair of small lobes at posterior margin; lateral line scales 108-116..... ..... *Sphyraena ensis*
3b - Dark bars on sides not in the form of chevrons; caudal fin with a pair of small lobes at central posterior margin; lateral line scales 120-130 ..... *Sphyraena qenie*
4a - Pectoral fins with 13 rays, their length 3.0 to 3.2 times in head length; lateral line scales 146-150 ..... *Sphyraena idiastes*
4b - Pectoral fins with 16 rays, their length 3.5 to 3.8 times in head length; lateral line scales more than 160 5
5a - Caudal fin yellowish; dark lateral line..... *Sphyraena argentea*
5b - Caudal fin greyish; whitish lateral line..... *Sphyraena lucasana*

* Considered absent from the Tropical Eastern Pacific, *S. barracuda* has been sighted at Galápagos Islands (R. Robertson, pers. com.).

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